



ISEA PAS

Institute of Systematics and Evolution of Animals
Polish Academy of Sciences



HR EXCELLENCE IN RESEARCH

Appendix 3

**DIRECTOR
OF THE INSTITUTE OF SYSTEMATICS AND EVOLUTION OF ANIMALS
OF THE POLISH ACADEMY OF SCIENCES IN KRAKOW**

is announcing a competition for NSC **scholarship** in the OPUS 25 project,

Project number: UMO-2023/49/B/ST10/02631,

Title: „*New fossils provide novel insights into the evolution of Cenozoic lizards and snakes from Europe and the circum-Mediterranean region*”;

Principal Investigator: dr hab. Georgios Georgalis (ORCID 0000-0001-7759-6146).

Main research tasks of the Student:

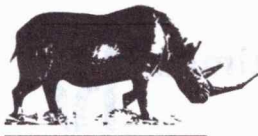
This is one Master student position for one year, focusing on part of the new fossil material that is the subject of this NSC project. The Master student will work on documenting in detail an abundant lizard and snake fossil material from different localities, with the aid of both visual microscopy (microscopes and cameras available at ISEA PAS) and μ CT (micro-computed tomography) scanning and 3D imaging. The student is expected, with the guidance and supervision of the Principal Investigator of this NSC project (Dr. hab. Georgios Georgalis), to make taxonomic identifications of the fossil material, write complete anatomical descriptions, and photographing the most important specimens. The student will also be trained and get in depth knowledge on the skeletal anatomy of extant reptiles, by using and consulting the abundant and rich collection of extant reptile skeletons housed at ISEA PAS. The student is expected to publish some results of the research conducted for this project also in international peer-reviewed journals. All this research is expected to be conducted physically at the facilities of ISEA PAS, and not remotely.

Additional information (e.g., special requirements from the student):

1. The candidate should be interested in herpetology, palaeontology, taxonomy, and reptiles in general.
2. A very good knowledge of the English language is necessary.
3. The ideal candidate should have a Bachelor degree on Biology or Geology, but candidates with some other or interdisciplinary background are also welcome to apply. The Bachelor degree is not necessary during the time of the application but the successful applicant should have this degree before starting this Master student project.
4. Working experience with fossil material and knowledge of 3D imaging and visualization are positive requirements for the candidate.

Working schedule:

- Starting the scholarship: **1 December 2024.**
- The student is expected to work 4 days * 4 hours (16 hours) / week.
- The work will be conducted physically (and not remotely) in the facilities of ISEA PAS in Krakow.
- The scholarship period: 1 year (12 months).



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Financial conditions:

Scholarship of 1920,00 PLN per month for 12 months financed by the National Science Centre, Poland (NSC) under the Opus project entitled: *“New fossils provide novel insights into the evolution of Cenozoic lizards and snakes from Europe and the circum-Mediterranean region”*.

List of required documents that the candidate should submit:

1. A detailed curriculum vitae (CV), with information on studies and, if any, scientific publications, participation in scientific conferences, internships.
2. A cover letter (maximum 1 page) explaining the reasons the applicant desires to be enrolled in this Master student project.
3. A certificate of the Bachelor degree. If the applicant is already enrolled in some Master program in a University, a confirmation about this fact is required.

Please add the following sentence to the cover letter and the detailed CV:

“I consent to the processing of my personal data included in the application documents for the purposes of the competition for the position indicated in the announcement and held by the Institute of Systematics and Evolution of Animals of the Polish Academy of Sciences. I have been informed that my consent is voluntary and that I have the right to withdraw it at any time, and that the withdrawal of my consent shall not affect the lawfulness of the processing that was carried out on its basis prior to its withdrawal. I also declare that I have read the information clause concerning the processing of personal data in accordance with the Regulation of the European Parliament and of the Council of 27 April 2016, included in the recruitment announcement issued by the Institute of Systematics and Evolution of Animals of the Polish Academy of Sciences”.

Application and submission process:

The applicant should send electronically the following documents to the addresses: georgalis@isez.pan.krakow.pl and rekrutacja@isez.pan.krakow.pl until **17 November 2024**:


The winner of the competition will be announced by **22 November 2024**.

ISEA PAS reserves the right to respond only to selected offers and to close the competition without selecting a candidate.

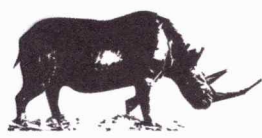
The competition organizer may invite candidates for an interview directly or electronically. The invitation will be sent to the e-mail address provided by the candidate in the application documents.

ISEA PAS does not provide accommodation.

Assoc. Prof. Beata Grzywacz


Director of the Institute of Systematics
and Evolution of Animals
Polish Academy of Sciences

Signature of the Director of ISEA PAS



Background information:

Squamata (i.e., lizards and snakes) are principal components of most terrestrial and aquatic environments across the planet. Their huge taxonomic diversity, counting more than 10,000 extant species, comprises, among others, iconic and emblematic species, as well as many medicinally important taxa. Frustratingly, most of these species are at the edge of extinction, due to rapid environmental and habitat destruction and other human-mediated causes. Nevertheless, many aspects regarding their evolution and taxonomic diversity across the Cenozoic Era (65 million years ago to today) remain a mystery.

Europe and the Mediterranean portions of Africa and Asia nowadays host a relatively modest diversity of squamates, especially when compared to the immense species richness and morphological disparity of these reptiles currently observed in the tropics. Nevertheless, fossil record attests that Cenozoic lizards and snakes of Europe and adjacent areas achieved an extremely wide variety of morphotypes, shapes, sizes, ecological adaptations, and locomotion styles, and pertained to a large number of lineages, many of which are now extirpated from the area or even totally extinct. However, the precise phylogenetic affinities of many extinct squamate groups remain obscure, while for Eastern Europe, and the Mediterranean portions of Africa and Asia, data from squamate fossil remains are rather scarce. Moreover, there is no consensus as for the biogeography and dispersal events of most lineages, as well as for the extinction patterns that affected their past diversity in the region.

This NSC project aims to thoroughly investigate major questions about the evolution of squamates in the Cenozoic of Europe and the circum-Mediterranean, particularly regarding their diversity, evolutionary patterns, anatomy, biogeography, and extinction events that can be gleaned through their fossil record. The project aims at the description and documentation of a large number of new specimens of lizards and snakes originating from several different fossil localities, pertaining to a wide array of ages and geographic areas. Such documentation of this novel fossil material is expected to be conducted with the aid of both visual microscopy and micro-computed tomography (μ CT) scanning and 3D imaging, which will reveal anatomical features that would be otherwise non-visible. These new finds, will add to our current knowledge and will lead to further analytical approaches to study evolutionary patterns of the Cenozoic lizard and snake communities of Europe and the circum-Mediterranean. As such, these will enable to investigate patterns of diversification and biogeography, when modern taxa appeared in the area, and test how each one of the squamate lineages responded to each of the major faunal dispersal and extinction events that hampered the Cenozoic of the region.